

UNITED STATES DISTRICT COURT  
DISTRICT OF MASSACHUSETTS

CIVIL ACTION NO. 06-10178-RGS

ACCU-TIME SYSTEMS, INC.

v.

ZUCCHETTI U.S.A.,  
ZUCCHETTI TMC S.r.l.,  
AND  
AXESS TMC S.r.l.

MEMORANDUM AND ORDER  
ON CLAIM CONSTRUCTION

May 3, 2007

STEARNS, D.J.

On May 26, 2005, Accu-Time Systems, Inc. (Accu-Time) filed this action against Zucchetti U.S.A., Zucchetti TMC S.r.l., and Axess TMC S.r.l. (collectively, TMC), alleging infringement of its U.S. Patent No. 5,959,541 (the '541 Patent). The case was originally filed in the Eastern District of Pennsylvania, and then transferred to this court on January 24, 2006. On July 12, 2006, Accu-Time amended the Complaint to add claims for infringement of its U.S. Patent No. 6,075,455 (the '455 Patent).<sup>1</sup> The parties initially sought the construction of a number of claim terms. On February 14, 2007, the court issued an order instructing the parties to identify with specificity those terms the construction of which was essential to a resolution of the infringement claims. The parties

---

<sup>1</sup>The '455 Patent is a continuation of the '541 Patent. Accu-Time alleges that the defendants have infringed Claims 1, 5, and 11 of the '541 Patent, and Claims 10 and 16 of the '455 Patent.

substantially narrowed their original submissions, and ultimately agreed that only two disputed terms needed to be construed by the court. A hearing on claim construction was held on April 11, 2007.

### BACKGROUND

The patents in suit teach a method for controlling access to restricted premises by means of epidermal scanning technology. A scanning system reads a portion of the human epidermis, typically a fingerprint, and compares the scanned print with fingerprint patterns stored in a database. If a match is found, the system determines whether the individual whose print has been scanned is permitted access to, or egress from, a secured location at any given time. The technology may also be used to maintain employee time and attendance records.

TMC manufactures and sells terminals to systems integration companies. These companies, in turn, integrate the terminals into their proprietary access control systems. The systems are then sold to end-users. Some of the terminals sold by TMC incorporate fingerprint scanners manufactured by a third party. In TMC's accused product, the fingerprint comparison function is performed by the scanner rather than by a stand alone component.

### Claim Construction

"It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude." Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005) (internal quotation marks and citation omitted). Infringement analysis thus begins with the construction of the patent claims alleged to

have been infringed. Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1454 (Fed. Cir. 1998) (en banc). Claim construction is a question of law for the court's determination. Markman v. Westview Instruments, Inc., 52 F.3d 967, 970-971 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370 (1996). The court will construe only those terms "that are in controversy, and only to the extent necessary to resolve the controversy." Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc., 200 F.3d 795, 803 (Fed. Cir. 1999).

Under the doctrine of claim construction, the words of a claim "are generally given their ordinary and customary meaning," which is the "meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." Phillips, 415 F.3d at 1312,1313, citing Vitronics Corp. v. Conception, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996), and Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1116 (Fed. Cir. 2004). The "claims 'must be read in view of the specification, of which they are part.'" Phillips, 415 F.3d at 1315, quoting Markman, 52 F.3d at 979. The "specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" Phillips, 415 F.3d at 1315, quoting Vitronics Corp., 90 F.3d at 1582. As the purpose of the specification is to enable one skilled in the art to duplicate the invention, see Phillips, 415 F.3d at 1323, it is "entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims." Id. at 1317.

"In addition to consulting the specification, . . . a court 'should also consider the patent's prosecution history, if it is in evidence.'" Id., quoting Markman, 52 F.3d at 980.

The prosecution history “often lacks the clarity of the specification and thus is less useful for claim construction purposes,” but “[n]onetheless, [it] can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” Phillips, 415 F.3d at 1317.

## 1. Disputed Terms

The terms to be construed are those of “host computing device” and “selectively overriding.”

### A. Host computing device

The parties’ main point of contention with respect to this term is whether the disclosed “host computing device” is required to perform the comparison of the epidermal topographical patterns. Accu-Time argues broadly that the function of the host device is to “control[] communications” among devices, regardless of “whether the devices are physically separated and operably connected, or are physically within the same unit and operably connected.” Accu-Time’s Mem. at 9.

TMC’s argument is by far the more persuasive. The specification discloses only one device that compares epidermal topographical patterns: the host computing device. The Abstract depicts a device that generates an epidermal topographical pattern and “transmit[s] [it] to a host computer for determining access privileges.” ‘541 Patent, Abstract.<sup>2</sup> The same language is employed in the Field of Invention section. Id., Col. 1,

---

<sup>2</sup>At the hearing, Accu-Time argued that defendants’ reference to the abstract is not permitted in determining the scope of the invention. However, as defendants correctly point out, this is not the case. See SciMed Life Sys., Inc. v. Advanced Cardiovascular

ll. 12-13. Similarly, the Summary of Invention states that “[e]ach terminal scans a predetermined epidermis and generates an epidermal topographical pattern which is transmitted to a host computing device. The host computing device compares the transmitted epidermal topographical pattern with the stored epidermal topographical patterns. If a match is found, the host computer reads the information associated with the stored epidermal topographical pattern and determines whether access or egress at the current time is permissible.” Id., Col. 2, ll. 28-36. Clearly, this describes a comparison function performed by the host and not some other optional component. In addition, the Description of Preferred Embodiments provides that “the scanner 12 reads a portion of an individual’s epidermis and generates an epidermal topographical pattern which is transmitted to the host 20 for comparison.” Id., Col. 3, ll. 31-34. “When an epidermis is detected (S3), the epidermal topographical scanner 12 scans the epidermis (S4), generates a digital epidermal topographical pattern signal (S5) and transmits that to the host 20 (S6). The host 20 compares the transmitted pattern with epidermal topographical patterns stored in the database 60 (S7).” Id., Col. 3, ll. 41-46. In the apparatus’ alternative embodiment, “[t]he identification information, along with the identification code, and epidermal topographical pattern are transmitted to the host 20 (S9). The host 20 compares the transmitted information with the information in the database (S10).” Id., Col. 5, ll. 10-14.

In light of the written descriptions in the specification, Accu-Time is hard pressed to plausibly argue that the comparison function envisioned by the ‘541 Patent is performed

---

Sys., Inc., 242 F.3d 1337, 1342 (Fed. Cir. 2001).

by any component other than the host computing device. Dictionary definitions also support defendants' proffered construction.<sup>3</sup> The definition provided for "host computer" in *Webster's Unabridged Dictionary* 924 (2d ed. 2001) is "the main computer in a network: controls or performs certain functions for other computers." A technical dictionary, the *Oxford University Dictionary of Computing* 229 (4th ed. 1996), defines "host computer" as "a computer that is attached to a network and provides services other than simply acting as a store-and-forward processor or communication switch." When questioned by the court at the hearing about this definition, Accu-Time's counsel agreed that the host computer must do more than simply route messages between or among devices; rather, it must do some processing. According to Accu-Time's counsel, the host "needs to initialize." The court understands this to mean that the host must be able to recognize the external devices to which it is connected in order to expedite intra-system communications. If Accu-Time's construction is correct, then the host device adds nothing of an exceptional nature to the operation of the system.

Accu-Time's last effort to bolster its argument resorts to prior art. Accu-Time notes that U.S. Patent No. 5,337,043 (the '043 Patent) discloses an access control system in which the comparison is performed by the processing device, rather than by the host

---

<sup>3</sup>The court is aware that the Federal Circuit has cautioned against overreliance on dictionaries. "Heavy reliance on the dictionary divorced from the intrinsic evidence risks transforming the meaning of the claim term to the artisan into the meaning of the term in the abstract, out of its particular context, which is the specification." *Phillips*, 415 F.3d at 1321. However, "[i]n some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words. . . . In such circumstances, general purpose dictionaries may be helpful." *Id.* at 1314 (internal citation omitted).

device. Therefore, Accu-Time argues, one of ordinary skill in the art would recognize that the comparison could be made by devices other than the host. While this may be true, Accu-Time does not identify any device or component disclosed in the '541 Patent other than the host that actually performs the comparison. Accordingly, the court adopts TMC's interpretation of this term as meaning "a processor or computer, connected to the data collection terminals through a network, that performs the comparison of the epidermal topographical pattern for a presented individual with the stored epidermal topographical patterns on behalf of a data collection terminal."<sup>4,5</sup>

B. Selectively overriding

The parties agree that this element is recited in a means-plus-function format under 35 U.S.C. § 112, ¶ 6. Construing a means-plus-function limitation is a two-step process. First, the court must identify the claimed function. JVW Enter., Inc. v. Interact Accessories, Inc., 424 F.3d 1324, 1330 (Fed. Cir. 2005). Second, the court must identify the corresponding structure in the written description that performs that function. Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1321 (Fed. Cir. 2003). "In order to qualify as corresponding, the structure must not only perform the claimed function, but the

---

<sup>4</sup>Defendants make a second convincing argument with regard to this element. They argue that the use of the word "host" in conjunction with the words "computing device" can only mean that the host performs some computing function. Defendants note that Claim 1 also describes a database that is "operatively associated" with the host. According to defendants, this necessarily means that the database is more than merely "in connection" with the host. Defendants construe the phrase "operatively associated with the host" to mean that the host accesses information stored in the database when activated.

<sup>5</sup>The parties agree that the court's claim construction applies to both the '541 Patent and the '455 Patent.

specification must clearly associate the structure with the performance of the function.” Cardiac Pacemakers, Inc. v. St. Jude Med., Inc., 296 F.3d 1106, 1113 (Fed. Cir. 2002). While the corresponding structure “need not include all things necessary to enable the claimed invention to work . . . [the] corresponding structure must include all structure that actually performs the recited function.” Id. at 1119. See also Generation II Orthotics, Inc. v. Med. Tech., Inc., 263 F.3d 1356, 1364-1365 (Fed. Cir. 2001) (“When construing the functional statement in a means-plus-function limitation, we must take great care not to impermissibly limit the function by adopting a function different from that explicitly recited in the claim.”).

The function identified in this element is the “selective override” of a denied access attempt without the loss of the stored epidermal topographical pattern. Accu-Time takes a simple approach to the specification, noting that if access is denied,<sup>6</sup> an individual may return to step S3 (where the print is first scanned) and present another epidermis for comparison.<sup>7</sup> ‘541 Patent, Col. 3, ll. 47-55, 65-67. If the second print matches a stored topographical pattern, access is granted. Id., Col. 4, ll. 1-11. Accu-Time contends that because the first-accessed pattern is not replaced or otherwise modified by this process, it is retained in the database as the specification requires. Accu-Time maintains that the

---

<sup>6</sup>As TMC’s counsel pointed out at oral argument, the need for a second epidermal test could arise if an individual had suffered a cut or some other injury to one of the fingers for which his or her prints had been stored.

<sup>7</sup>Step S3 for all practical purposes represents an individual’s first step in the process, as it is the point at which an epidermis is detected (steps S1 and S2 involve the activation of the terminal and the initialization of the system, respectively).



return to Step 3 and the scanner are the means and the structure, respectively, that correspond to the recited function.<sup>8</sup>

Defendants argue that the “selective overriding” of a denied access attempt involves a procedure significantly more complex than the one portrayed by Accu-Time. This procedure is described in steps S11 through S16 of FIG. 3A/3B.

If the transmitted epidermal topographical pattern of an individual wishing to gain access does not match one of the stored epidermal topographical patterns, access is denied (S7A), the host computer stores time of the attempt and generates a report (S7B). The display prompts security personnel to make a personal review or investigation of the individual. If it is determined that the individual should gain access, the security personnel proceeds to input an authorization code (S11). After an authorization code is entered and followed by the individual’s personal identification code, the individual then places the predetermined epidermis, preferably a finger, on the epidermal topographical scanner 12 (S12 and S13). The epidermis is read and a new epidermal topographical pattern is generated (S14). The new epidermal topographical pattern is transmitted along with the personal identification code to the host 20, which stores the new epidermal topographical pattern with the personal identification code of the individual (S15 and S16). Thus, the database 60 is updated and the system returns to step S3.

‘541 Patent, Col. 3, ll. 47-65.

Defendants contend that in order to override a denied access attempt, an individual rejected by the system does not simply return to step S3. Rather, they argue that the host must be programmed to: (1) prompt security personnel to input an authorization code; (2) verify that the authorization code has been entered; (3) add the new epidermal topographical pattern to the existing database; and (4) only then return to step S3.

---

<sup>8</sup>In addition, Accu-Time notes that alternative structures for achieving this function are described with reference to FIGS. 4-6. In the alternative embodiment, an individual may use a card and card-specific scanner or a keypad associated with the apparatus to present personal identification information. ‘541 Patent, Col. 4, ll. 40-64. As shown in FIG. 7, if an individual is denied access and is returned to step S3, the individual initiates the process of presenting another epidermis by using a card or a keypad.

Therefore, TMC argues, in addition to the scanner, a keypad (for entering the authorization code) and a display (to prompt the security guard) are required as corresponding structures.

Defendants' argument finds support in the prosecution history of the '541 Patent. A patent's prosecution history "can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." Phillips, 415 F.3d at 1317. "The purpose of consulting the prosecution history in construing a claim is to 'exclude any interpretation that was disclaimed during prosecution.'" Chimie v. PPG Indus., Inc., 402 F.3d 1371, 1384 (Fed. Cir. 2005), quoting ZMI Corp. v. Cardiac Resuscitator Corp., 844 F.2d 1576, 1580 (Fed. Cir. 1998).

The '541 Patent resulted ultimately from Application 08/936,031. However, the Patent and Trademark Office (PTO) first issued two Office Actions rejecting the '031 Application claims as anticipated by the claims of two earlier patents. In its December 22, 1998 Reply to the PTO's first rejection, Accu-Time stated that "Claims 1, 8 and 14 have been amended to *more clearly point out the overriding features* of the present invention as disclosed on page 9, line 7-11 and page 11, lines 3-21." (Emphasis added). Accu-Time drew the Examiner's attention to newly inserted language stating that the "overriding means" corresponded to an authorization code. Page 9, lines 7-11, read:

[i]n the event the individual damaged the stored epidermis pattern while in the controlled area, the host 20 stores the time and date of attempted exit (S7A) and generates a report. An authorization code (S11) may be input by security personnel to permit the individual's departure from the controlled area. The

authorization code also permits the individual to submit a new epidermal topographical pattern to update the database (S13-S16).

Page 11, lines 3-21, read:

[i]f the transmitted information of the individual seeking access does not match (S10A), the terminal 100 stores the time of attempted entry or exit. The display 14 prompts security personnel to make a personal review or investigation of the individual. A display 14 requests a security or authorization code (S14). If it is determined that the individual should gain access, the security guard or other authorized person enters a security code or authorization code (S15). If an authorization code is entered and followed by the individual's personal identification code, the individual places the predetermined epidermis on the epidermal topographical scanner 12 (S16), which reads the epidermis and generates an epidermal topographical pattern (S17). This pattern is transmitted along with the personal identification code to the host (S18). The host then replaces the old epidermal topographical pattern with the transmitted epidermal topographical pattern in the database 60 (S19). The system then returns to step (S3) so that the individual can obtain access to or egress from the controlled area by repeating steps (S3-S10). If an authorization code is not entered, the system returns to step S3.

The page and line references clearly disclosed the use of an authorization code as part of the override function. On March 8, 1999, the PTO issued a Final Office Action, rejecting amended Claim 1 as being obvious. Accu-Time then narrowed the scope of the “overriding means” even further by requiring the “selective overriding” of a denied access attempt. As TMC argues, this amendment did not eliminate the need for an authorization code. Rather, it underscored the role played by the security guard in deciding whether to override the denied access attempt. Accu-Time does not address the prosecution history. It simply argues that there is no requirement that the host prompt security personnel at step S11, or that an individual necessarily continue the process to step S16.

Accu-Time is correct that the specification does not literally *require* that an authorization code be entered. It merely states that “[i]f an authorization code is not

entered, the system returns to step S3.” ‘541 Patent, Col. 3, ll. 65-66. However, Accu-Time’s interpretation does not allow for the actual overriding of a denial of access; rather, it simply restarts the process in what could theoretically become an endless loop. Because this construction is essentially empty of any meaning, the court will adopt TMC’s proposed construction. Means for “selectively overriding” is to be construed as including the following components: “(1) the host is programmed to perform the following steps of the algorithm of FIGS. 3A/3B: S11, S12, and S16, and then return to step S3 to begin the access process again; (2) a keypad 16 for receiving an authorization code; and (3) a display 14 for displaying the security personnel prompt.”

#### ORDER

For the foregoing reasons, the two disputed terms will be construed for purposes of this litigation in a manner consistent with this opinion.

SO ORDERED.

/s/ Richard G. Stearns

---

UNITED STATES DISTRICT JUDGE

**Publisher Information**

**Note\* This page is not part of the opinion as entered by the court.  
The docket information provided on this page is for the benefit  
of publishers of these opinions.**

1:06-cv-10178-RGS Accu-Time Systems, Incorporated v. Zuccetti U.S.A. et al  
Richard G. Stearns, presiding  
Date filed: 01/24/2006 Date of last filing: 04/12/2007

**Attorneys**

Joseph H. Corselli Mintz, Levin, Cohn, Ferris, Glovsky & Popeo, PC One Financial Center Boston, MA 02111 617-348-4867 617-542-2241 (fax) jhcorselli@mintz.com Assigned: 02/07/2006 ATTORNEY TO BE NOTICED	representi ng	Accu-Time Systems, Incorporated (Plaintiff)
Anthony J. Fitzpatrick Duane Morris LLP 470 Atlantic Avenue Suite 500 Boston, MA 02210 857-488-4200 857-488-4201 (fax) ajfitzpatrick@duanemorris.com Assigned: 03/01/2006 LEAD ATTORNEY ATTORNEY TO BE NOTICED	representi ng	Accu-Time Systems, Incorporated (Counter Defendant) Axess TMC S.r.1 (Defendant)
Sandra A. Jeskie Duane Morris LLP 30 South 17th Street Philadelphia, PA 19103-4196 US 215-979-1395 215-979-1020 (fax) jeskie@duanemorris.com Assigned: 01/24/2006 LEAD ATTORNEY ATTORNEY TO BE NOTICED	representi ng	Zuccetti U.S.A. (Defendant) Zucchetti TMC S.r.1 (Defendant) Axess TMC S.r.1 (Defendant)
Christopher S. Kroon Duane Morris LLP 470 Atlantic Ave. Suite 500 Boston, MA 02210 857-488-4276 857-488-4201 (fax) cskroon@duanemorris.com Assigned: 06/29/2006 ATTORNEY TO BE NOTICED	representi ng	Zuccetti U.S.A. (Defendant) Zucchetti TMC S.r.1 (Defendant) Axess TMC S.r.1 (Defendant)
John J. O'Malley Volpe and Koenig, P.C. United Plaza, Suite 1600 30 South 17th Street Philadelphia, PA 19103 215-568-6400 215- 568-6499 (fax) JOMalley@volpe-koenig.com Assigned: 01/24/2006 LEAD ATTORNEY ATTORNEY TO BE NOTICED	representi ng	Zuccetti U.S.A. (Defendant) Zucchetti TMC S.r.1 (Defendant) Accu-Time Systems, Incorporated (Plaintiff)
Joseph A. Powers Duane Morris, LLP 30 South 17th Street Philadelphia, PA 19103 US 215-	representi ng	Axess TMC S.r.1 (Defendant)

979-1842 215-979-1020 (fax)  
japowers@duanemorris.com Assigned:  
10/12/2006 LEAD ATTORNEY ATTORNEY TO  
BE NOTICED

Anthony S. Volpe Volpe & Koenig PC United  
Plaza Suite 1600 30 South 17th Street  
Philadelphia, PA 19103 US 215-568-6400 215-  
568-6499 (fax) avolpe@volpe-koenig.com  
Assigned: 01/24/2006 LEAD ATTORNEY  
ATTORNEY TO BE NOTICED

James M. Wodarski Mintz, Levin, Cohn, Ferris,  
Glovsky & Popeo, PC One Financial Center  
Boston, MA 02111 617-542-6000 617-542-2241  
(fax) jmwodarski@mintz.com Assigned:  
02/07/2006 LEAD ATTORNEY ATTORNEY TO  
BE NOTICED

representi  
ng

Zuccetti U.S.A. (Defendant)  
Zucchetti TMC S.r.l  
(Defendant)  
Accu-Time Systems,  
Incorporated (Plaintiff)

representi  
ng

Accu-Time Systems,  
Incorporated (Plaintiff)